In the Claims:

1. (original) A method comprising generating a reference velocity to control a moveable arm, wherein the reference velocity is based on a function that causes a first derivative with respect to time of the reference velocity to vary linearly with respect to time.

2. (currently amended) The method of claim 1, wherein the function is ~~may be~~ expressed as a distance to be traveled, divided by a remaining seek time and multiplied by a constant.

3. (original) The method of claim 1, wherein the function is a first function, wherein the reference velocity is initially determined in accordance with a second function, and wherein the reference velocity is determined in accordance with the first function in response to the moveable arm reaching a position that is within a pre-designated distance from target position.

4. (original) An apparatus comprising:

a moveable assembly; and

circuitry having an output lead and coupled to control the moveable assembly, wherein the circuitry is adapted to generate a command signal responsive to a reference velocity and provide the command signal on the output lead, wherein the reference velocity is determined in accordance with a function that causes a first derivative with respect to time of the reference velocity to vary linearly with respect to time.

5. (original) The apparatus of claim 4, wherein the function may be expressed as a distance to be traveled, divided by a remaining seek time and multiplied by a constant.

6. (original) The apparatus of claim 4, wherein the function is a first function, wherein the reference velocity is initially determined in accordance with a second function that is distinct from the first function, and wherein the reference velocity becomes determined in

accordance with the first function in response to the moveable assembly reaching a position that is within a pre-designated distance from a desired position.

7. (original) The apparatus of claim 4 further including a motor that is controlled by the circuitry and is adapted to move the moveable assembly.

8. (original) The apparatus of claim 7 further including a storage medium where the moveable assembly is moved relative to the storage medium.

9. (original) The apparatus of claim 4, wherein the circuitry includes a stored-program computing device.

10. (original) The apparatus of claim 4, wherein the moveable assembly includes a transducer, is configured to rotate about an axis and moves the transducer with respect to a plurality of tracks by rotating about the axis.

11. (original) The apparatus of claim 4, wherein the moveable assembly is configured to reposition the transducer with respect to the plurality of tracks by moving linearly in a radial direction with respect to the storage medium.

12. (original) A method comprising:

determining a reference velocity based on at least a current position of a moveable arm;

comparing a current velocity of the moveable arm with the reference velocity to generate an error signal;

combining the error signal with a compensation signal to generate a command signal, wherein the compensation signal is derived from a current acceleration; and

applying the command signal to move the moveable arm, wherein the reference velocity is determined in accordance with a function that causes a first derivative with respect to time of the reference velocity to vary linearly with respect to time.

13. (original) The method of claim 12 further comprising the steps of:

determining the current velocity of the moveable arm;

determining a current position of the moveable arm; and

determining the current acceleration of the moveable arm.